TTDRVR

```
TTTTTTTTTT  TTTTTTTTTT  YY      YY  DDDDDDD    RRRRRRRR   VV      VV  DDDDDDD      AAAAAA    TTTTTTTTTT
TTTTTTTTTT  TTTTTTTTTT  YY      YY  DDDDDDD    RRRRRRRR   VV      VV  DDDDDDD      AAAAAA    TTTTTTTTTT
    TT          TT      YY      YY  DD    DD   RR     RR  VV      VV  DD    DD   AA      AA      TT
    TT          TT      YY      YY  DD    DD   RR     RR  VV      VV  DD    DD   AA      AA      TT
    TT          TT        YY  YY    DD    DD   RR     RR  VV      VV  DD    DD   AA      AA      TT
    TT          TT        YY  YY    DD    DD   RR     RR  VV      VV  DD    DD   AA      AA      TT
    TT          TT          YY      DD    DD   RRRRRRRR   VV      VV  DD    DD   AA      AA      TT
    TT          TT          YY      DD    DD   RRRRRRRR   VV      VV  DD    DD   AAAAAAAAAA      TT
    TT          TT          YY      DD    DD   RR    RR   VV      VV  DD    DD   AAAAAAAAAA      TT
    TT          TT          YY      DD    DD   RR    RR     VV  VV    DD    DD   AA      AA      TT    ....
    TT          TT          YY      DD    DD   RR     RR     VV  VV   DD    DD   AA      AA      TT    ....
    TT          TT          YY      DDDDDDD    RR     RR      VV      DDDDDDD    AA      AA      TT    ....
    TT          TT          YY      DDDDDDD    RR     RR      VV      DDDDDDD    AA      AA      TT    ....

LL            IIIIII     SSSSSSSS
LL            IIIIII     SSSSSSSS
LL              II     SS
LL              II     SS
LL              II     SS
LL              II       SSSSSS
LL              II       SSSSSS
LL              II            SS
LL              II            SS
LL              II            SS
LL              II            SS
LLLLLLLLLL    IIIIII     SSSSSSSS
LLLLLLLLLL    IIIIII     SSSSSSSS
```

TTYDRVDAT
V04-001

B 13
- Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page   1
                                          7-SEP-1984 17:56:59 [TTDRVR.SRC]TTYDRVDAT.MAR;2   (1)

```
0000     1          .TITLE  TTYDRVDAT - Terminal driver data base module
0000     2          .IDENT  'V04-001'
0000     3
0000     4
0000     5  ;******************************************************************************
0000     6  ;*                                                                            *
0000     7  ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                   *
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0000    23  ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                   *
0000    24  ;*                                                                            *
0000    25  ;*                                                                            *
0000    26  ;******************************************************************************
0000    27
0000    28  ;++
0000    29  ; FACILITY:
0000    30  ;
0000    31  ;       VAX/VMS TERMINAL DRIVER
0000    32  ;
0000    33  ; ABSTRACT:
0000    34  ;
0000    35  ;       TERMINAL DRIVER DATA BASE
0000    36  ;
0000    37  ; AUTHOR:
0000    38  ;
0000    39  ;       R.HEINEN 14-JUN-1977
0000    40  ;
0000    41  ; Enhancement Revision history:
0000    42  ;
0000    43  ;       V04-001 MIR1100         Michael I. Rosenblum    7-Sep-1984
0000    44  ;               The multinational set in the Type table did not conform
0000    45  ;               to that specified in the VT200 series terminals.
0000    46  ;               This was fixed.
0000    47  ;
0000    48  ;       V03-022 LMP0275         L. Mark Pilant,         12-Jul-1984  21:03
0000    49  ;               Initialize the ACL info in the ORB to be a null descriptor
0000    50  ;               list rather than an empty queue.  This avoids the overhead
0000    51  ;               of locking and unlocking the ACL mutex, only to find out
0000    52  ;               that the ACL was empty.
0000    53  ;
0000    54  ;       V03-021 MIR0450         Michael I. Rosenblum            27-Jun-1984
0000    55  ;               Make the read verify array correspond with that in FMS and
0000    56  ;               TDMS as far as multinational is concerned.
0000    57  ;
```

```
0000   58 ;    V03-020 EMD0098           Ellen M. Dusseault      14-May-1984
0000   59 ;            Add dev$m_nnm characteristic to DEVCHAR2 so that these
0000   60 ;            devices will have the "node$" prefix.
0000   61 ;
0000   62 ;    V03-019 LMP0221           L. Mark Pilant,       7-Apr-1984  13:38
0000   63 ;            Change UCB$L_OWNUIC to ORB$L_OWNER and UCB$W_VPROT to
0000   64 ;            ORB$W_PROT.
0000   65 ;
0000   66 ;    V03-018 RKS0018           RICK SPITZ                    05-MAR-1984
0000   67 ;            Do not set template bit it VTA0 UCB to prevent
0000   68 ;            assign from creating new UCBs when it is referenced.
0000   69 ;
0000   70 ;    V03-017 MIR0310           Michael I. Rosenblum          09-Feb-1984
0000   71 ;            Put a turn off attributes sequence in the DECcrt commands
0000   72 ;            To allow terminals that don't correctly handle Save and
0000   73 ;            Restore to be able to use the new strings.
0000   74 ;
0000   75 ;    V03-016 MIR0300           Michael I. Rosenblum          30-Jan-1984
0000   76 ;            add input fallback table to tables
0000   77 ;            remove recall key.
0000   78 ;
0000   79 ;    V03-015 MIR0080           Michael I. Rosenblum          15-Jul-1983
0000   80 ;            Restructure module and add 8bit support to read verify
0000   81 ;            table.
0000   82 ;
0000   83 ;    V03-014 MIR0051           Michael I. Rosenblum          23-Jun-1983
0000   84 ;            Change defalut lk201 key definitions.
0000   85 ;            Make fallback table smaller and remove the multi character
0000   86 ;            expansions.  Move fallback table into terminal driver generic
0000   87 ;            tables.
0000   88 ;
0000   89 ;    V03-013 RKS0013           RICK SPITZ                    4-JUN-1983
0000   90 ;            Add support for detached terminal template UCB
0000   91 ;
0000   92 ;    V03-012 JLV0256           Jake VanNoy                   23-MAY-1983
0000   93 ;            Add extra pointers to allow table-driven multiecho.
0000   94 ;
0000   95 ;    V03-011 MIR0049           Michael I. Rosenblum          06-May-1983
0000   96 ;            Add fallback presentation table macro.
0000   97 ;
0000   98 ;    V03-010 MIR0030           Michael I. Rosenblum          30-Mar-1983
0000   99 ;            Add Verification array for read verification.   Add eight
0000  100 ;            bit support and common escape escape seqeunce optomization
0000  101 ;            tables.  Also change messages for the echoing control characters
0000  102 ;            to reflect the new lk201 definitions, add dec crt messages
0000  103 ;            and regis messages.  Put in alternate echo string support.
0000  104 ;
0000  105 ;
0000  106 ;    V03-009 MIR0029           Michael I. Rosenblum          21-Mar-1983
0000  107 ;            Add code to handle overstrike mode and non-termination
0000  108 ;            on unusual terminators.
0000  109 ;
0000  110 ;    V03-008 MIR4026           Michael I. Rosenblum          09-Mar-1983
0000  111 ;            Remove character input restriction from the TAB key.
0000  112 ;
0000  113 ;    V03-007 MIR0026           Michael I. Rosenblum          15-Feb-1983
0000  114 ;            Add data to handle the new type of reads.  This includes
```

D 13

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page   3
V04-001   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (1)

```
0000   115 ;                              enhancements to the input character dispatcher.
0000   116 ;
0000   117 ;          V03-006 MIR0017         Michael I. Rosenblum            05-Jan-1983
0000   118 ;              Add CLASS_POWERFAIL entry point.
0000   119 ;
0000   120 ;          V03-005 MIR0015         Michael I. Rosenblum            20-Dec-1982
0000   121 ;              Add CLASS_FORK and CLASS_DISCONNECT class entry points.
0000   122 ;
0000   123 ;          V03-004 MIR0013         Michael I. Rosenblum            16-Dec-1982
0000   124 ;              Fix up refferences to new ucb structure
0000   125 ;
0000   126 ;          V03-003 MIR0011         Michael I. Rosenblum            18-Nov-1982
0000   127 ;              Change all strings to be counted strings.
0000   128 ;              Remove all strings for holdscreen.
0000   129 ;              Add TTY$A_ANSI_DEOL which contains the ANSI escape sequence
0000   130 ;              that will go to the beginning of the line and clear to the end
0000   131 ;              of the line.
0000   132 ;
0000   133 ;          V03-002 KDM0002         Kathleen D. Morse              28-Jun-1982
0000   134 ;              Added $DYNDEF.
0000   135 ;--
0000   136 ;--
```

TTYDRVDAT   E 13
V04-001   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page   4
         Declarations   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (2)

```
                0000    138                     .SBTTL  Declarations
                0000    139
                0000    140  ;
                0000    141  ; EXTERNAL DEFINITIONS
                0000    142  ;
                0000    143              $DDBDEF                         ; DEFINE DDB OFFSETS
                0000    144              $DYNDEF                         ; DEFINE DYNAMIC DATA STRUCTURE TYPES
                0000    145              $IODEF                          ; DEFINE I/O FUNCTION CODES
                0000    146              $ORBDEF                         ; DEFINE OBJECT'S RIGHTS BLOCK OFFSETS
                0000    147              $TTYDEF                         ; DEFINE TERMINAL DRIVER SYMBOLS
                0000    148              $TTDEF                          ; DEFINE TERMINAL CHARACTERISTICS
                0000    149              $UCBDEF                         ; DEFINE UCB
                0000    150              $VECDEF                         ; DEFINE VECTOR FOR CRB
                0000    151              $TTYDEFS                        ; DEFINE TERMINAL DEFINITIONS
            00000000    152              .PSECT  $$$115_DRIVER,LONG
```

F 13

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page   5
V04-001   autobaud tables   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (3)

```
                   0000    154                    .sbttl   autobaud tables
                   0000    155
                   0000    156   TTY$AB_9600::                                      ; Table for samples taken at 9600
                   0000    157
         10 7F     0000    158                    .BYTE    ^X7F,TT$C_BAUD_19200
         10 7A     0002    159                    .BYTE    ^X7A,TT$C_BAUD_19200
         10 72     0004    160                    .BYTE    ^X72,TT$C_BAUD_19200
         10 7E     0006    161                    .BYTE    ^X7E,TT$C_BAUD_19200
         0F 0D     0008    162                    .BYTE    ^X0D,TT$C_BAUD_9600
         0D 66     000A    163                    .BYTE    ^X66,TT$C_BAUD_4800
         0C 0C     000C    164                    .BYTE    ^X0C,TT$C_BAUD_3600
         0B 78     000E    165                    .BYTE    ^X78,TT$C_BAUD_2400
         09 70     0010    166                    .BYTE    ^X70,TT$C_BAUD_1800
         08 00     0012    167                    .BYTE    ^X00,TT$C_BAUD_1200
         FF FF     0014    168                    .BYTE    -1,-1                     ; End of list
       00000026    0016    169                    .BLKB    16                        ; Patch space
                   0026    170
                   0026    171   TTY$AB_600::                                       ; Table for samples taken at 600
                   0026    172
         08 7E     0026    173                    .BYTE    ^X7E,TT$C_BAUD_1200
         08 72     0028    174                    .BYTE    ^X72,TT$C_BAUD_1200
         07 0D     002A    175                    .BYTE    ^X0D,TT$C_BAUD_600
         06 66     002C    176                    .BYTE    ^X66,TT$C_BAUD_300
         05 78     002E    177                    .BYTE    ^X78,TT$C_BAUD_150
         03 60     0030    178                    .BYTE    ^X60,TT$C_BAUD_110
         03 70     0032    179                    .BYTE    ^X70,TT$C_BAUD_110
         FF FF     0034    180                    .BYTE    -1,-1                     ; End of list
       00000046    0036    181                    .BLKB    16                        ; Patch space
                   0046    182
```

```
        0046    184                 .SBTTL  CHARACTER DISPATCH TABLE - MACROS
        0046    185    ;++
        0046    186    ; $DISINI
        0046    187    ;
        0046    188    ; DESCRIPTION:
        0046    189    ;       SETS UP A 256 BYTE TABLE TO ALLOW A QUICK DISPATCH ON INPUT CHARACTERS
        0046    190    ;
        0046    191    ; INPUTS:
        0046    192    ;       NONE
        0046    193    ;--
        0046    194
        0046    195                 .MACRO  $DISINI
        0046    196    $$$=.
        0046    197    .REPEAT 32
        0046    198                 .BYTE   TTY$K_ET_UNUSED
        0046    199    .ENDR
        0046    200                 .BLKB   256-32
        0046    201    $$$$=.
        0046    202                 .ENDM   $DISINI
```

```
0046    204    ;++
0046    205    ; $DIS
0046    206    ;
0046    207    ; DESCRIPTION:
0046    208    ;       GIVEN A LIST OF CHARACTERS WILL FILL EACH OF THEIR BYTES WITH
0046    209    ; THE CHARACTER DISPATCH TOKEN THAT THIS CHARACTER TRANSLATES TO.
0046    210    ;
0046    211    ; INPUTS:
0046    212    ;       CHARLIST = A LIST OF CHARACTERS TO FILL WITH THIS TOKEN
0046    213    ;       TOKEN = THE TOKEN CHARACTER.  ONE OF THE FOLLOWING:
0046    214    ;                       1               CONTROL-U
0046    215    ;                       2               CONTROL-R
0046    216    ;                       3               DEL
0046    217    ;                       4               ESCAPE CHARACTER
0046    218    ;                       5               BACKWARD 1 CHAR
0046    219    ;                       6               FORWARD 1 CHAR
0046    220    ;                       7               END OF LINE
0046    221    ;                       8               BEGINNING OF LINE
0046    222    ;                       9               DELETE WORD LEFT
0046    223    ;--
0046    224            .MACRO  $DIS    CHARLIST,TOKEN
0046    225    .IRP    CHAR,CHARLIST
0046    226            .=$$$+CHAR
0046    227            .BYTE   TOKEN
0046    228    .ENDR
0046    229            .ENDM   $DIS
0046    230
0046    231    ;++
0046    232    ; $DISEND
0046    233    ;
0046    234    ; DESCRIPTIONS
0046    235    ;       PUTS THE END ON THE CHARACTER DISPATCH TABLE
0046    236    ;--
0046    237            .MACRO  $DISEND
0046    238            .=$$$$
0046    239            .ENDM   $DISEND
```

```
                    0046     241           .SBTTL  CHARACTER DISPATCH TABLE
         0000008E   0046     242  TTY$C_SS2=^X8E
         0000008F   0046     243  TTY$C_SS3=^X8F
                    0046     244  TTY$A_CCLIST::
                    0046     245           $DISINI
                    0146     246           $DIS    TTY$C_CTRLU,TTY$K_ET_CTRLU
                    005C     247           $DIS    TTY$C_CTRLR,TTY$K_ET_CTRLR
                    0059     248           $DIS    TTY$C_DELETE,TTY$R_ET_DELEFT
                    00C6     249           $DIS    <TTY$C_CSI,TTY$C_ESCAPE,TTY$C_LOWESC1,TTY$C_LOWESC2>,TTY$K_ET_ESCAPE
                    00C5     250           $DIS    <TTY$C_SS2,TTY$C_SS3>,TTY$K_ET_ESCAPE
                    00D6     251           $DIS    TTY$C_CTRLD,TTY$R_ET_BACK_CHAR
                    004B     252           $DIS    TTY$C_CTRLF,TTY$K_ET_FORWARD_CHAR
                    004D     253           $DIS    TTY$C_CTRLE,TTY$K_ET_MOVE_EOL
                    004C     254           $DIS    TTY$C_BS,TTY$K_ET_MOVE_BOL
                    004F     255           $DIS    TTY$C_CTRLV,TTY$K_ET_QUOTING
                    005D     256           $DIS    TTY$C_LF,TTY$K_ET_DELETE_WORD
                    0051     257           $DIS    TTY$C_CTRLB,TTY$K_ET_RECALL
                    0049     258           $DIS    TTY$C_TAB,0          ; ALLOW TAB EVEN IF NOT A TERMINATOR
                    0050     259           $DIS    <TTY$C_CR,TTY$C_CTRLZ>,TTY$K_ET_TERMINATE; TERMIANATE THE READ
                    0061     260           $DIS    TTY$C_CTRLA,TTY$K_ET_TOGGEL      ; TOGGEL INSERT/OVERSTRIKE MODE
                    0048     261           $DISEND
```

```
          0146    263                    .SBTTL   CHARACTER TYPE TABLE MACRO
          0146    264          ;++
          0146    265          ; TYPE - TYPE TABLE MACRO GENERATOR
          0146    266          ;
          0146    267          ; Description:
          0146    268          ;
          0146    269          ;        The type table is used by the character output routines to determine
          0146    270          ; several things, whether the character is a spaceing or non spaceing character,
          0146    271          ; If this character needs specail attention pre or post typeahead, and if
          0146    272          ; this character is lower case.
          0146    273          ;
          0146    274          ;        The table is a table of bytes.  The lower nibble is a count of
          0146    275          ; the occurance of this type of entry, and the high order nibbel is a set
          0146    276          ; of flags.
          0146    277          ;
          0146    278          ; Inputs:
          0146    279          ;        Type - one of SPEC, CONTROL, CTRL2, CTRL3, LOWER
          0146    280          ;--
          0146    281                  .MACRO  TYPE     TYP
          0146    282                  Y=0
          0146    283                  .IF     NB       TYP
          0146    284                  Y=XY'TYP
          0146    285                  XY'TYP=1+XY'TYP
          0146    286                  .IF     IDN      CONTROL,TYP
          0146    287                  Y=Y!<TTY$M_CH_CTRL>
          0146    288                  .ENDC
          0146    289                  .IF     IDN      SPEC,TYP
          0146    290                  Y=Y!<TTY$M_CH_SPEC>
          0146    291                  .ENDC
          0146    292                  .IF     IDN      CTRL2,TYP
          0146    293                  Y=Y!<TTY$M_CH_CTRL2>
          0146    294                  .ENDC
          0146    295                  .IF     IDN      CTRL3,TYP
          0146    296                  Y=<TTY$M_CH_CTRL3>
          0146    297                  .ENDC
          0146    298                  .IF     IDN      LOWER,TYP
          0146    299                  Y=<TTY$M_CH_LOWER>
          0146    300                  .ENDC
          0146    301                  .ENDC
          0146    302                  .IF     GE       CHAR-97
          0146    303                  .IF     LE       CHAR-97-25
          0146    304                  Y=<TTY$M_CH_LOWER>
          0146    305                  .ENDC
          0146    306                  .ENDC
          0146    307                  .BYTE   Y
          0146    308                  CHAR=CHAR+1
          0146    309                  .ENDM
          0146    310          ;
          0146    311          ; INITIALIZE COUNTS
          0146    312          ;
00000000  0146    313          CHAR=0
00000000  0146    314          XYSPEC=0
00000000  0146    315          XYCONTROL=0
00000000  0146    316          XYCTRL2=0
00000000  0146    317          XYCTRL3=0
00000000  0146    318          XYLOWER=0
```

K 13

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 10
V04-001   CHARACTER TYPE TABLE   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (8)

```
0146    320              .SBTTL  CHARACTER TYPE TABLE
0146    321
0146    322     TTY$A_TYPE::
0146    323              TYPE    CTRL3                   ; NULL
0147    324              TYPE    CTRL3                   ; CONTROL A
0148    325              TYPE    CTRL3                   ; CONTROL B
0149    326              TYPE    CONTROL                 ; CONTROL C
014A    327              TYPE    CTRL3                   ; CONTROL D
014B    328              TYPE    CTRL3                   ; CONTROL E
014C    329              TYPE    CTRL3                   ; CONTROL F
014D    330              TYPE    CTRL3                   ; BELL CONTROL G
014E    331              TYPE    SPEC                    ; BACKSPACE
014F    332              TYPE    SPEC                    ; TAB
0150    333              TYPE    SPEC                    ; LINE FEED
0151    334              TYPE    SPEC                    ; VERTICLE TAB
0152    335              TYPE    SPEC                    ; FORM FEED
0153    336              TYPE    SPEC                    ; CARRIAGE RETURN
0154    337              TYPE    CTRL3                   ; CONTROL N
0155    338              TYPE    CONTROL                 ; CONTROL O
0156    339              TYPE    CTRL3                   ; CONTROL P
0157    340              TYPE    CONTROL                 ; CONTROL Q
0158    341              TYPE    CTRL2                   ; CONTROL R
0159    342              TYPE    CONTROL                 ; CONTROL S
015A    343              TYPE    CTRL3                   ; CONTROL T
015B    344              TYPE    CTRL2                   ; CONTROL U
015C    345              TYPE    CTRL3                   ; CONTROL V
015D    346              TYPE    CTRL3                   ; CONTROL W
015E    347              TYPE    CONTROL                 ; CONTROL X
015F    348              TYPE    CONTROL                 ; CONTROL Y
0160    349              TYPE    SPEC                    ; CONTROL Z
0161    350              TYPE    CONTROL                 ; ESCAPE
0162    351              TYPE    CTRL3
0163    352              TYPE    CTRL3
0164    353              TYPE    CTRL3
0165    354              TYPE    CTRL3
0166    355              TYPE                            ; SPACE
0167    356              TYPE                            ; !
0168    357              TYPE                            ; "
0169    358              TYPE                            ; #
016A    359              TYPE                            ; $
016B    360              TYPE                            ; %
016C    361              TYPE                            ; &
016D    362              TYPE                            ; '
016E    363              TYPE                            ; (
016F    364              TYPE                            ; )
0170    365              TYPE                            ; *
0171    366              TYPE                            ; +
0172    367              TYPE                            ; ,
0173    368              TYPE                            ; -
0174    369              TYPE                            ; .
0175    370              TYPE                            ; /
0176    371              TYPE                            ; 0
0177    372              TYPE                            ; 1
0178    373              TYPE                            ; 2
0179    374              TYPE                            ; 3
017A    375              TYPE                            ; 4
017B    376              TYPE                            ; 5
```

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 11
V04-001   CHARACTER TYPE TABLE   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (8)

                                                                                        L 13

```
017C   377   TYPE                           ; 6
017D   378   TYPE                           ; 7
017E   379   TYPE                           ; 8
017F   380   TYPE                           ; 9
0180   381   TYPE                           ; :
0181   382   TYPE                           ; ;
0182   383   TYPE                           ; <
0183   384   TYPE                           ; =
0184   385   TYPE                           ; >
0185   386   TYPE                           ; ?
0186   387   TYPE                           ; @
0187   388   TYPE                           ; A
0188   389   TYPE                           ; B
0189   390   TYPE                           ; C
018A   391   TYPE                           ; D
018B   392   TYPE                           ; E
018C   393   TYPE                           ; F
018D   394   TYPE                           ; G
018E   395   TYPE                           ; H
018F   396   TYPE                           ; I
0190   397   TYPE                           ; J
0191   398   TYPE                           ; K
0192   399   TYPE                           ; L
0193   400   TYPE                           ; M
0194   401   TYPE                           ; N
0195   402   TYPE                           ; O
0196   403   TYPE                           ; P
0197   404   TYPE                           ; Q
0198   405   TYPE                           ; R
0199   406   TYPE                           ; S
019A   407   TYPE                           ; T
019B   408   TYPE                           ; U
019C   409   TYPE                           ; V
019D   410   TYPE                           ; W
019E   411   TYPE                           ; X
019F   412   TYPE                           ; Y
01A0   413   TYPE                           ; Z
01A1   414   TYPE                           ; [
01A2   415   TYPE                           ; \
01A3   416   TYPE                           ; ]
01A4   417   TYPE                           ; ^
01A5   418   TYPE                           ; _
01A6   419   TYPE                           ; ELISPE
01A7   420   TYPE                           ; LOWER A
01A8   421   TYPE                           ; LOWER B
01A9   422   TYPE                           ; LOWER C
01AA   423   TYPE                           ; LOWER D
01AB   424   TYPE                           ; LOWER E F
01AC   425   TYPE                           ; LOWER F
01AD   426   TYPE                           ; LOWER G
01AE   427   TYPE                           ; LOWER H I
01AF   428   TYPE                           ; LOWER I J
01B0   429   TYPE                           ; LOWER J K
01B1   430   TYPE                           ; LOWER K
01B2   431   TYPE                           ; LOWER L M
01B3   432   TYPE                           ; LOWER M N
01B4   433   TYPE                           ; LOWER N
```

```
                    01B5   434        TYPE                   ; LOWER O
                    01B6   435        TYPE                   ; LOWER P
                    01B7   436        TYPE                   ; LOWER Q
                    01B8   437        TYPE                   ; LOWER R
                    01B9   438        TYPE                   ; LOWER S
                    01BA   439        TYPE                   ; LOWER T
                    01BB   440        TYPE                   ; LOWER U
                    01BC   441        TYPE                   ; LOWER V
                    01BD   442        TYPE                   ; LOWER W
                    01BE   443        TYPE                   ; LOWER X
                    01BF   444        TYPE                   ; LOWER Y
                    01C0   445        TYPE                   ; LOWER Z
                    01C1   446        TYPE                   ; CURRLY LEFT
                    01C2   447        TYPE                   ; UP LINE
                    01C3   448        TYPE                   ; CURRLY RIGHT
                    01C4   449        TYPE                   ; WIGGLE
                    01C5   450        TYPE      CTRL2        ; DELETE
                    01C6   451
                    01C6   452
                    01C6   453
                    01C6   454   ; 8 BIT CHARACTERS
                    01C6   455   ;
                    01C6   456
                    01C6   457        TYPE      CTRL3        ; RESERVED
                    01C7   458        TYPE      CTRL3        ; RESERVED
                    01C8   459        TYPE      CTRL3        ; RESERVED
                    01C9   460        TYPE      CTRL3        ; RESERVED
                    01CA   461        TYPE      CTRL3        ; IND
                    01CB   462        TYPE      CTRL3        ; NEL
                    01CC   463        TYPE      CTRL3        ; SSA
                    01CD   464        TYPE      CTRL3        ; ESA
                    01CE   465        TYPE      CTRL3        ; HTS
                    01CF   466        TYPE      CTRL3        ; HTJ
                    01D0   467        TYPE      CTRL3        ; VTS
                    01D1   468        TYPE      CTRL3        ; PLD
                    01D2   469        TYPE      CTRL3        ; PLU
                    01D3   470        TYPE      CTRL3        ; RI
                    01D4   471        TYPE      CTRL3        ; SS2
                    01D5   472        TYPE      CTRL3        ; SS3
                    01D6   473        TYPE      CTRL3        ; DCS
                    01D7   474        TYPE      CTRL3        ; PU1
                    01D8   475        TYPE      CTRL3        ; PU2
                    01D9   476        TYPE      CTRL3        ; STS
                    01DA   477        TYPE      CTRL3        ; CCH
                    01DB   478        TYPE      CTRL3        ; MW
                    01DC   479        TYPE      CTRL3        ; SPA
                    01DD   480        TYPE      CTRL3        ; EPA
                    01DE   481        TYPE      CTRL3        ; RESERVED
                    01DF   482        TYPE      CTRL3        ; RESERVED
                    01E0   483        TYPE      CTRL3        ; RESERVED
                    01E1   484        TYPE      CONTROL      ; CSI IS A CONTROL
                    01E2   485        TYPE      CTRL3        ; ST
                    01E3   486        TYPE      CTRL3        ; OSC
                    01E4   487        TYPE      CTRL3        ; PM
                    01E5   488        TYPE      CTRL3        ; APC
                    01E6   489        TYPE                   ; RESERVED
                    01E7   490        TYPE                   ; INVERTED EXCLAATION
```

```
01E8    491    TYPE                                    ; CENT
01E9    492    TYPE                                    ; POUND
01EA    493    TYPE                                    ; RESERVED
01EB    494    TYPE                                    ; YEN
01EC    495    TYPE                                    ; RESERVED
01ED    496    TYPE                                    ; SECTION
01EE    497    TYPE                                    ; CURRENCY
01EF    498    TYPE                                    ; COPYRIGHT
01F0    499    TYPE                                    ; FEMINANE ORDINAL
01F1    500    TYPE                                    ; LEFT ANGLE QUOTE
01F2    501    TYPE                                    ; RESERVED
01F3    502    TYPE                                    ; RESERVED
01F4    503    TYPE                                    ; RESERVED
01F5    504    TYPE                                    ; RESERVED
01F6    505    TYPE                                    ; DEGREE
01F7    506    TYPE                                    ; PLUS/MINUS
01F8    507    TYPE                                    ; SUPER 2
01F9    508    TYPE                                    ; SUPER 3
01FA    509    TYPE                                    ; RESERVED
01FB    510    TYPE                                    ; MICRO
01FC    511    TYPE                                    ; PARAGRAPH
01FD    512    TYPE                                    ; MIDDLE DOT
01FE    513    TYPE                                    ; RESERVED
01FF    514    TYPE                                    ; SUPER 1
0200    515    TYPE                                    ; MASCULINE ORDINAL
0201    516    TYPE                                    ; ALGLE QUOTE RIGHT
0202    517    TYPE                                    ; 1/4
0203    518    TYPE                                    ; 1/2
0204    519    TYPE                                    ; RESERVED
0205    520    TYPE                                    ; INVERTED ?
0206    521    TYPE                                    ; CAP A GRAVE
0207    522    TYPE                                    ; CAP A ACUTE
0208    523    TYPE                                    ; CAP A CERC
0209    524    TYPE                                    ; CAP A TILDE
020A    525    TYPE                                    ; CAP A DIAERESSIS OR UMLAUT
020B    526    TYPE                                    ; CAP A WITH RING
020C    527    TYPE                                    ; AE DIPTHONG
020D    528    TYPE                                    ; C CEDILLA
020E    529    TYPE                                    ; CAP E GRAVE
020F    530    TYPE                                    ; CAP E ACUTE
0210    531    TYPE                                    ; CAP E CERC
0211    532    TYPE                                    ; CAP E DIAERESSIS OR UMLAUT
0212    533    TYPE                                    ; I GRAVE
0213    534    TYPE                                    ; I ACCUTE
0214    535    TYPE                                    ; I CIRC
0215    536    TYPE                                    ; I UMLAUT
0216    537    TYPE                                    ;  RESERVED
0217    538    TYPE                                    ; N TILDE
0218    539    TYPE                                    ; CAP O GRAVE
0219    540    TYPE                                    ; CAP O ACUTE
021A    541    TYPE                                    ; CAP O CERC
021B    542    TYPE                                    ; CAP O TILDE
021C    543    TYPE                                    ; CAP O DIAERESSIS OR UMLAUT
021D    544    TYPE                                    ; OE
021E    545    TYPE                                    ; O WITH SLASH
021F    546    TYPE                                    ; U GRAVE
0220    547    TYPE                                    ; U ACCUTE
```

```
                    0221   548            TYPE                    ; U CIRC
                    0222   549            TYPE                    ; U UMLAUT
                    0223   550            TYPE                    ; Y WITH DIAERESIS OR UMLAUT
                    0554   551            TYPE                    ;  RESREVED
                    0225   552            TYPE                    ; SMALL SHARP S
                    0226   553      ;
                    0226   554      ; LOWER CASE EIGHT BIT CHARACTERS
                    0226   555      ;
                    0226   556            TYPE    LOWER           ; LOWER A GRAVE
                    0227   557            TYPE    LOWER           ; LOWER A ACUTE
                    0228   558            TYPE    LOWER           ; LOWER A CERC
                    0229   559            TYPE    LOWER           ; LOWER A TILDE
                    022A   560            TYPE    LOWER           ; LOWER A DIAERESSIS OR UMLAUT
                    022B   561            TYPE    LOWER           ; LOWER A WITH RING
                    022C   562            TYPE    LOWER           ; AE DIPTHONG
                    022D   563            TYPE    LOWER           ; C CEDILLA
                    022E   564            TYPE    LOWER           ; e GRAVE
                    022F   565            TYPE    LOWER           ; e ACCUTE
                    0230   566            TYPE    LOWER           ; e CIRC
                    0231   567            TYPE    LOWER           ; e UMLAUT
                    0232   568            TYPE    LOWER           ; I GRAVE
                    0233   569            TYPE    LOWER           ; I ACCUTE
                    0234   570            TYPE    LOWER           ; I CIRC
                    0235   571            TYPE    LOWER           ; I UMLAUT
                    0236   572            TYPE                    ;  RESERVED
                    0237   573            TYPE    LOWER           ; N TILDE
                    0238   574            TYPE    LOWER           ; LOWER O GRAVE
                    0239   575            TYPE    LOWER           ; LOWER O ACUTE
                    023A   576            TYPE    LOWER           ; LOWER O CERC
                    023B   577            TYPE    LOWER           ; LOWER O TILDE
                    023C   578            TYPE    LOWER           ; LOWER O DIAERESSIS OR UMLAUT
                    023D   579            TYPE    LOWER           ; OE
                    023E   580            TYPE    LOWER           ; O WITH SLASH
                    023F   581            TYPE    LOWER           ; U GRAVE
                    0240   582            TYPE    LOWER           ; U ACCUTE
                    0241   583            TYPE    LOWER           ; U CIRC
                    0242   584            TYPE    LOWER           ; U UMLAUT
                    0243   585            TYPE    LOWER           ; Y WITH DIAERESIS OR UMLAUT
                    0244   586            TYPE                    ;  RESREVED
                    0245   587            TYPE                    ;  RESERVED
```

```
                    0246     589
                    0246     590              .SBTTL   ESCAPE SEQUENCE TO TOKEN TRANSLATION TABLE
                    0246     591    interrupt_key::
      7E 37 31 5B 1B 0246     592              .ASCII   <TTY$C_ESCAPE>/[17~/      ; OS interupt key
      00000005      024B     593    interrupt_key_len==.-interrupt_key
                    024B     594
                    024B     595    TTY$A_FCNTKN::
      0000025D      024B     596              .BLKB    18                        ; 0 - 18 AREN'T DEFINED
            0D      025D     597              .BYTE    TTY$K_ET_UNUSED           ; 18
            0D      025E     598              .BYTE    TTY$K_ET_UNUSED           ; 19
            0D      025F     599              .BYTE    TTY$K_ET_UNUSED           ; 20
            00      0260     600              .BYTE    0                         ; 21 EXIT KEY
            00      0261     601              .BYTE    0                         ; 22 IS UNDEFINED
            0D      0262     602              .BYTE    TTY$K_ET_UNUSED           ; 23
            08      0263     603              .BYTE    TTY$K_ET_MOVE_BOL         ; 24
            09      0264     604              .BYTE    TTY$K_ET_DELETE_WORD      ; 25
            0C      0265     605              .BYTE    TTY$K_ET_TOGGEL           ; 26
      0000001B      0266     606    TTY$K_MAXESCTKN==.-TTY$A_FCNTKN
```

```
              0266     608              .SBTTL  ESCAPE SYNTAX TABLE
              0266     609 ;
              0266     610 ; ESCAPE SYNTAX TABLE
              0266     611 ;
              0266     612 TTY$A_ESCAPE::                                 ; ESCAPE SYNTAX TABLE
              0266     613 ;
              0266     614 ; ESCAPE SEQUENCE <ESC><;><32:47>....<48:126>
              0266     615 ;
     3B 3B    0266     616              .ASCII  /;;/                     ; '';''
        0F'   0268     617              .BYTE   10$-TTY$A_ESCAPE         ;
              0269     618 ;
              0269     619 ; ESCAPE SEQUENCE <ESC><?><32:47>....<48:126>
              0269     620 ;
     3F 3F    0269     621              .ASCII  /??/                     ; ''?''
        0F'   026B     622              .BYTE   10$-TTY$A_ESCAPE         ;
              026C     623 ;
              026C     624 ; ESCAPE SEQUENCE <ESC><O><32:47>....<64:126>
              026C     625 ;
     4F 4F    026C     626              .ASCII  /OO/                     ; ''O''
        18'   026E     627              .BYTE   20$-TTY$A_ESCAPE         ;
              026F     628 ;
              026F     629 ; ESCAPE SEQUENCE <ESC><Y><32:126><32:126>
              026F     630 ;
     59 59    026F     631              .ASCII  /YY/                     ; ''Y''
        1E'   0271     632              .BYTE   30$-TTY$A_ESCAPE         ;
              0272     633 ;
              0272     634 ; ANSI CONTROL SEQUENCES <ESC><[><48:63>...<32:47>...<64:126>
              0272     635 ;
     5B 5B    0272     636              .ASCII  /[[/                     ; ''[''
        15'   0274     637              .BYTE   15$-TTY$A_ESCAPE         ;
              0275     638
              0275     639 ;
              0275     640 ; ESCAPE SEQUENCE <ESC><32:47>....<48:126>
              0275     641 ;
   0000000F   0275     642 TTY$K_SS2==.-TTY$A_ESCAPE
     2F 20    0275     643 10$:         .ASCII  ! 7!                     ; SPACE TO ''/''
        0F    0277     644              .BYTE   10$-TTY$A_ESCAPE         ; INTERMEDIATE CHARACTER
     7E 30    0278     645              .ASCII  /0/<126>                 ; ''0'' TO END
        00    027A     646              .BYTE   0                        ; FINAL
   00000015   027B     647 TTY$K_CSI==.-TTY$A_ESCAPE                     ; CSI PREFEXES THE FOLLOWING
     3F 30    027B     648 15$:         .ASCII  /0?/                     ; ''0'' TO ''?''
        15    027D     649              .BYTE   15$-TTY$A_ESCAPE
   00000018   027E     650 TTY$K_SS3==.-TTY$A_ESCAPE
     2F 20    027E     651 20$:         .ASCII  ! 7!                     ; SPACE TO ''/''
        18    0280     652              .BYTE   20$-TTY$A_ESCAPE
     7E 40    0281     653              .ASCII  /@/<126>                 ; ''@'' TO END
        00    0283     654              .BYTE   0                        ; END OF ESC O.
     7E 20    0284     655 30$:         .ASCII  ! !<126>                 ; SPACE TO END
        21'   0286     656              .BYTE   40$-TTY$A_ESCAPE
     7E 20    0287     657 40$:         .ASCII  ! !<126>                 ;
        00    0289     658              .BYTE   0                        ;
              028A     659 ;
              028A     660 ; ESCAPE SEQUENCES WITH MEANING FOR OUTPUT
              028A     661 ;
              028A     662 ; THERE IS A CORRELATION BETWEEN THIS TABLE AND CODE!
              028A     663 ;
              028A     664 TTY$A_ESC_OUT::
```

```
5A 4B 47 46 59 49 48 44 43 42 41 00' 028A    665            .ASCIC  /ABCDHIYFGKZ>=\[/            ;
                        5B 5C 3D 3E  0296
                        0F  028A
```

F 14

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 18
V04-001   ESCAPE SYNTAX TABLE   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (12)

```
                029A   667 ;
                029A   668 ; 8bit C1 input code to C0 code trantion table
                029A   669 ;
                029A   670 TTY$A_8BITESC::
000002A7        029A   671          .BLKB   13                          ; MOVE TO SS2
      4E        02A7   672          .BYTE   ^A/N/                       ; SS2
      4F        02A8   673          .BYTE   ^A/O/                       ; SS3
000002B5        02A9   674          .BLKB   12                          ; MOVE TO CSI
      5B        02B5   675          .BYTE   ^A/[/                       ; CSI
000002BA        02B6   676          .BLKB   4                           ; FILL OUT THE TABLE
```

```
                    02BA    678 ;
                    02BA    679 ; ESCAPE SEQUENCE RULE INITIALIZATION TABLE
                    02BA    680 ;
                    02BA    681 TTY$A_ESCINIT::
000002C7            02BA    682         .BLKB   13                      ; MOVE TO SS2
      OF            02C7    683         .BYTE   TTY$K_SS2               ; SS2
      18            02C8    684         .BYTE   TTY$K_SS3               ; SS3
000002D5            02C9    685         .BLKB   12                      ; MOVE TO CSI
      15            02D5    686         .BYTE   TTY$K_CSI               ; CSI
000002DA            02D6    687         .BLKB   4                       ; FILL OUT THE TABLE
```

TTYDRVDAT
V04-001

H 14
- Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 20
FALLBACK - table that will create fallba 7-SEP-1984 17:56:59 [TTDRVR.SRC]TTYDRVDAT.MAR;2   (14)

```
02DA   689                    .SBTTL  FALLBACK - table that will create fallback presentation
02DA   690   ;++
02DA   691   ;FALLBACK - TABLE TO ALLOW THE TERMINAL TO DO FALLBACK PRESENTATION OF
02DA   692   ;            8BIT CHARACTERS on 7 bit terminals
02DA   693   ;
02DA   694   ; Description:
02DA   695   ;        The following macros generate 3 tables.  The first is a 256 byte
02DA   696   ; table with the single character fallback representation of all the
02DA   697   ; characters that can be represented by a single character, those with
02DA   698   ; no fallback presentation at all are represented by the _ character,
02DA   699   ; those with multiple character representation have a 0 in there position.
02DA   700   ; The second table is a list of counted strings containing the characters
02DA   701   ; for all the characters that have multiple character fallback representation.
02DA   702   ; The third table is a 96 byte table that contains the offsets into the
02DA   703   ; second table of the counted string for the given character.  The base
02DA   704   ; of the third table is the first 8 bit printing character
02DA   705   ;
02DA   706   ;--
02DA   707                    .macro  $fallini
02DA   708   $$=0
02DA   709   .repeat 256
02DA   710   .IF LE $$-<^X9F>               ; EVERYTHING BUT THE MULTINATIONAL SET SHOULD
02DA   711                                 ; ECHO AS ITSELF.
02DA   712                    .byte $$
02DA   713   .IFF
02DA   714                    .BYTE ^A/_/
02DA   715   .ENDC
02DA   716   $$=$$+1
02DA   717   .endr
02DA   718   $$$=.
02DA   719   .SAVE
02DA   720                    .PSECT  $$$115_TTDRVR_EXPTAB
02DA   721   EXPTAB:
02DA   722   .REPEAT 96
02DA   723                    .BYTE   0
02DA   724   .ENDR
02DA   725   TT_END=.
02DA   726                    .PSECT  $$$115_TTDRVR_EXPAN
02DA   727   EXPAN:
02DA   728   .RESTORE
02DA   729
02DA   730                    .endm   $fallini
```

TTYDRVDAT   I 14
V04-001   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 21
               FALLBACK - table that will create fallba   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (15)

```
02DA    732  ;++
02DA    733  ; $FALL - generates the table entry for a given character
02DA    734  ;
02DA    735  ; Inputs:
02DA    736  ;
02DA    737  ;            CHARH - COLUMN IN THE ASCII TABLE.
02DA    738  ;            CHARL - ROW IN THE ASCII TABLE.
02DA    739  ;            FALLBACK - String that is the fallback representation
02DA    740  ;            COUNT - Number of times to repeat this character
02DA    741  ;--
02DA    742          .MACRO  $FALL   CHARH,CHARL,FALLBACK,COUNT=1
02DA    743  .=FALLTAB+<CHARH*16>+CHARL
02DA    744  .REPEAT COUNT
02DA    745  .NCHR   SLEN,^\FALLBACK\
02DA    746  .IF EQ  SLEN-1
02DA    747          .BYTE   ^A/FALLBACK/
02DA    748  .IFF
02DA    749          .BYTE   255
02DA    750  .SAVE
02DA    751          .PSECT  $$$115_TTDRVR_EXPAN
02DA    752  $$EXP=.-EXPAN
02DA    753          .ASCIC  !FALLBACK!
02DA    754          .PSECT  $$$115_TTDRVR_EXPTAB
02DA    755  .=EXPTAB+<CHARH*16>+CHARL-150
02DA    756          .BYTE   $$EXP
02DA    757  .RESTORE
02DA    758  .ENDC
02DA    759  .ENDR
02DA    760          .ENDM   $FALL
```

J 14

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 22
V04-001   FALLBACK - table that will create fallba   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (16)

```
02DA    762  ;++
02DA    763  ; $FALLEND - GENERATES END CONDITIONS FOR THE FALLBACK TABLE
02DA    764  ;
02DA    765  ; Description:
02DA    766  ;
02DA    767  ;       Resets the . to the end of the fallback table
02DA    768  ;
02DA    769  ; Inputs:
02DA    770  ;
02DA    771  ;       None
02DA    772  ;--
02DA    773         .MACRO  $FALLEND
02DA    774  .=$$$
02DA    775         .ENDM   $FALLEND
```

K 14

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 23
V04-001   FALLBACK - table that will create fallba 7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (18)

```
02DA    777
02DA    778 FALLTAB:
02DA    779         $FALLINI
03DA    780         $FALL    10,1,!
037C    781         $FALL    10,2,c
037D    782         $FALL    10,3,L
037E    783         $FALL    10,5,Y
0380    784 ;       $FALL    10,7,Sc
0380    785 ;       $FALL    10,8,O
0383    786 ;       $FALL    10,9,(C)
0383    787 ;       $FALL    10,10,a
0385    788 ;       $FALL    10,11,^!<<!
0385    789         $FALL    11,0,o
038B    790         $FALL    11,1,+
038C    791         $FALL    11,2,2
038D    792         $FALL    11,3,3
038E    793         $FALL    11,5,u
0390    794 ;       $FALL    11,6,Pr
0390    795 ;       $FALL    11,7,.
0392    796         $FALL    11,9,1
0394    797         $FALL    11,10,o
0395    798 ;       $FALL    11,11,^!>>!
0395    799 ;;      $FALL    11,12,<1/4>
0395    800 ;       $FALL    11,13,<1/2>
0395    801         $FALL    11,15,?
039A    802         $FALL    12,0,A,6
03A0    803 ;       $FALL    12,6,AE
03A0    804         $FALL    12,7,C
03A2    805         $FALL    12,8,E,4
03A6    806         $FALL    12,12,I,4
03AA    807         $FALL    13,1,N
03AC    808         $FALL    13,2,O,5
03B1    809 ;       $FALL    13,7,OE
03B1    810 ;       $FALL    13,8,O
03B3    811         $FALL    13,9,U,4
03B7    812         $FALL    13,13,Y
03B8    813 ;       $FALL    13,15,ss
03B8    814         $FALL    14,0,a,6
03C0    815 ;       $FALL    14,6,ae
03C0    816         $FALL    14,7,c
03C2    817         $FALL    14,8,e,4
03C6    818         $FALL    14,12,i,4
03CA    819         $FALL    15,1,n
03CC    820         $FALL    15,2,o,5
03D1    821 ;       $FALL    15,7,oe
03D1    822         $FALL    15,8,o
03D3    823         $FALL    15,9,u,4
03D7    824         $FALL    15,13,y
03D8    825         $FALLEND
03DA    826
```

TTYDRVDAT
V04-001

L 14
- Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 24
FALLBACK - table that will create fallba   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (20)

03DA   828

TT
Sy

$$
$$
$$
$$
AL
AL
AT
CH
CH
CL
CR
CT
DC
DD
DE
DE
DE
DE
DE
DE
DE
DP
DP
DP
DP
DP
DY
DY
DY
DY
DY
EX
EX
EX
FA
FU
FU
IN
IN
IN
IO
IO
IO
IO
IO
IO
IO
IO
IO
IO
IO
IO
IO
IO
IO

```
                              03DA    830                .SBTTL   TERMINATOR BITMASK FOR STANDARD SET
                              03DA    831  ;
                              03DA    832  ;
                              03DA    833  ;
                              03DA    834  TTY$A_STANDARD::
                     FFFFEOFF  03DA    835                .LONG    ^X0FFFFE0FF              ; BS,TAB,LF,VT,FORM NOT TERMS
80000000 00000000 00000000    03DE    836                .LONG    0,0,^X80000000          ; AND DELETE
                     FFFFEOFF  03EA    837                .LONG    ^X0FFFFE0FF              ;
80000000 00000000 00000000    03EE    838                .LONG    0,0,^X80000000          ;
```

```
                         03FA    840                .SBTTL   WORD TERMINATOR BIT MASK MACRO AND TABLE
                         03FA    841        ;
                         03FA    842        ; This is the default word terminator bitmask, this table is used
                         03FA    843        ; by the delete word routine to determine when a word ends.
                         03FA    844        ;
                         03FA    845        TTY$A_WORDTERM::
            FFFFFFFF     03FA    846                .LONG    -1                                     ; ALL THE CONTROL CHARACTERS
            FC00FBDF     03FE    847                .LONG    ^B11111110000000000111110111101111; ALL THE SPECAILS EXCEPT THE DIGI
            38000001     0402    848                .LONG    ^B00111000000000000000000000000001; THE UPPER CASE LETTERS AREN'T TE
            B8000001     0406    849                .LONG    ^B10111000000000000000000000000001; THE LOWER CASE LETTERS AREN'T EI
                         040A    850        ; duplicate for the eight bit set
            FFFFFFFF     040A    851                .LONG    -1                                     ; ALL THE CONTROL CHARACTERS
            FC00FFFF     040E    852                .LONG    ^B11111110000000000111111111111111; ALL THE SPECAILS EXCEPT THE DIGI
            38000001     0412    853                .LONG    ^B00111000000000000000000000000001; THE UPPER CASE LETTERS AREN'T TE
            B8000001     0416    854                .LONG    ^B10111000000000000000000000000001; THE LOWER CASE LETTERS AREN'T EI
                         041A    855        ;
                         041A    856        ; There are certain characters which are  to be considered words on there
                         041A    857        ; own (characters like the = which are delimeters) this table contains
                         041A    858        ; the bits for those characters.
                         041A    859        ;
                         041A    860        TTY$A_PREFIX::
            00000000     041A    861                .LONG    0                                      ; ALL THE CONTROL CHARACTERS
            10008208     041E    862                .LONG    ^B00010000000000010000010000001000;
            08000001     0422    863                .LONG    ^B00001000000000000000000000000001; THE UPPER CASE LETTERS AREN'T TE
            08000000     0426    864                .LONG    ^B00001000000000000000000000000000; THE LOWER CASE LETTERS AREN'T EI
                         042A    865        ; duplicate for the eight bit set
            00000000     042A    866                .LONG    0                                      ; ALL THE CONTROL CHARACTERS
            00000000     042E    867                .LONG    0
            00000000     0432    868                .LONG    0
            00000000     0436    869                .LONG    0
```

TTYDRVDAT
V04-001

B 15
- Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 27
VERIFY_ARRAY - Array of definitions for   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (23)

```
                   043A      871              .SBTTL   VERIFY_ARRAY - Array of definitions for Read verifictaion
                   043A      872      ;
                   043A      873      ;        VERIFICATION ARRAY
                   043A      874      ;
                   043A      875
          00000001 043A      876      ALPHA_UPPER = 1
          00000002 043A      877      ALPHA_LOWER = 2
          00000004 043A      878      NUM09 = 4
          00000008 043A      879      PLUS_MINUS = 8
          00000010 043A      880      PRINTABLE = 16
          00000020 043A      881      CHAR_ALL = 32
                   043A      882      ;
                   043A      883      ;
                   043A      884      VERIFY_ARRAY::
                   043A      885              .REPEAT 32
                   043A      886      .BYTE   CHAR_ALL
       20          043A      887              .ENDR
       33          045A      888      .BYTE   CHAR_ALL!PRINTABLE!ALPHA_UPPER!ALPHA_LOWER
                   045B      889              .REPEAT 10
                   045B      890      .BYTE   CHAR_ALL!PRINTABLE
       30          045B      891              .ENDR
       38          0465      892      .BYTE   CHAR_ALL!PRINTABLE!PLUS_MINUS
       30          0466      893      .BYTE   CHAR_ALL!PRINTABLE
       38          0467      894      .BYTE   CHAR_ALL!PRINTABLE!PLUS_MINUS
       38          0468      895      .BYTE   CHAR_ALL!PRINTABLE!PLUS_MINUS
       30          0469      896      .BYTE   CHAR_ALL!PRINTABLE
                   046A      897              .REPEAT 10
                   046A      898      .BYTE   CHAR_ALL!PRINTABLE!NUM09
       34          046A      899              .ENDR
                   0474      900              .REPEAT 7
                   0474      901      .BYTE   CHAR_ALL!PRINTABLE
       30          0474      902              .ENDR
                   047B      903              .REPEAT 26
                   047B      904      .BYTE   CHAR_ALL!PRINTABLE!ALPHA_UPPER
       31          047B      905              .ENDR
                   0495      906              .REPEAT 6
                   0495      907      .BYTE   CHAR_ALL!PRINTABLE
       30          0495      908              .ENDR
                   049B      909              .REPEAT 26
                   049B      910      .BYTE   CHAR_ALL!PRINTABLE!ALPHA_LOWER
       32          049B      911              .ENDR
                   04B5      912              .REPEAT 4
                   04B5      913      .BYTE   CHAR_ALL!PRINTABLE
       30          04B5      914              .ENDR
       20          04B9      915      .BYTE   CHAR_ALL
                   04BA      916              .REPEAT 32
                   04BA      917      .BYTE   CHAR_ALL
       20          04BA      918              .ENDR
       20          04DA      919      .BYTE   CHAR_ALL
                   04DB      920              .REPEAT 3
                   04DB      921      .BYTE   CHAR_ALL!PRINTABLE
       30          04DB      922              .ENDR
       20          04DE      923      .BYTE   CHAR_ALL
       30          04DF      924      .BYTE   CHAR_ALL!PRINTABLE
       20          04E0      925      .BYTE   CHAR_ALL
                   04E1      926              .REPEAT 5
                   04E1      927      .BYTE   CHAR_ALL!PRINTABLE
```

TTYDRVDAT
V04-001

C 15
- Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 28
VERIFY_ARRAY - Array of definitions for   7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (23)

```
      30  04E1   928                .ENDR
          04E6   929                .REPEAT 4
          04E6   930  .BYTE  CHAR_ALL
      20  04E6   931                .ENDR
          04EA   932                .REPEAT 4
          04EA   933  .BYTE  CHAR_ALL!PRINTABLE
      30  04EA   934                .ENDR
      20  04EE   935  .BYTE  CHAR_ALL
          04EF   936                .REPEAT 3
          04EF   937  .BYTE  CHAR_ALL!PRINTABLE
      30  04EF   938                .ENDR
      20  04F2   939  .BYTE  CHAR_ALL
          04F3   940                .REPEAT 5
          04F3   941  .BYTE  CHAR_ALL!PRINTABLE
      30  04F3   942                .ENDR
      20  04F8   943  .BYTE  CHAR_ALL
      30  04F9   944  .BYTE  CHAR_ALL!PRINTABLE
          04FA   945                .REPEAT 16
          04FA   946  .BYTE  CHAR_ALL!PRINTABLE!ALPHA_UPPER
      31  04FA   947                .ENDR
      20  050A   948  .BYTE  CHAR_ALL
          050B   949                .REPEAT 13
          050B   950  .BYTE  CHAR_ALL!PRINTABLE!ALPHA_UPPER
      31  050B   951                .ENDR
      20  0518   952  .BYTE  CHAR_ALL
      30  0519   953  .BYTE  CHAR_ALL!PRINTABLE
          051A   954                .REPEAT 16
          051A   955  .BYTE  CHAR_ALL!PRINTABLE!ALPHA_LOWER
      32  051A   956                .ENDR
      20  052A   957  .BYTE  CHAR_ALL
          052B   958                .REPEAT 13
          052B   959  .BYTE  CHAR_ALL!PRINTABLE!ALPHA_LOWER
      32  052B   960                .ENDR
      20  0538   961  .BYTE  CHAR_ALL
      20  0539   962  .BYTE  CHAR_ALL
```

D 15

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16 VAX/VMS Macro V04-00   Page 29
V04-001   SPECIAL STRINGS   7-SEP-1984 17:56:59 [TTDRVR.SRC]TTYDRVDAT.MAR;2   (24)

```
                                        053A    964              .SBTTL  SPECIAL STRINGS
                                        053A    965      ;
                                        053A    966      ; MULTI ECHO STRINGS
                                        053A    967      ;
                                        053A    968      ;*****************************************************************************
                                        053A    969      ; ALL OF THE SPECAIL STRINGS MUST BE COUNTED STRINGS (1 BYTE LENGTH COUNT
                                        053A    970      ;   FOLLOWED BY DATA
                                        053A    971      ;*****************************************************************************
                                        053A    972      ;
                                        053A    973      ; TAB STRINGS
                                        053A    974      ;
     20 20 20 20 20 20 20 20 00'        053A    975  TTY$A_TAB::                   .ASCIC  /        /
                               08       053A
                                        0543    976      ;
                                        0543    977      ; BACKSPACE STRING
                                        0543    978      ;
        08 08 08 08 08 08 08 07         0543    979  TTY$A_DELCRTTAB::             .BYTE   7,TTY$C_BS,TTY$C_BS,TTY$C_BS,TTY$C_BS,TTY$C_BS,-
                                        054B    980                                        TTY$C_BS,TTY$C_BS
                 08 20 08 03            054B    981  TTY$A_BACKSPACE::             .BYTE   3,TTY$C_BS,TTY$C_BLANK,TTY$C_BS
                    08 20 02            054F    982  TTY$A_SPACEBACK::             .BYTE   2,TTY$C_BLANK,TTY$C_BS
                                        0552    983      ;
                                        0552    984      ; UTILITY STRINGS
                                        0552    985      ;
                                        0552    986      ; THE ORGANIZATION OF THIS TABLE IS CRITICAL
                                        0552    987      ;
                                        0552    988      ;
                          OD 00'        0552    989  TTY$A_CTRLU::   .ASCIC  <TTY$C_CR>
                             01         0552
                          OD 00'        0554    990  TTY$A_CTRLR::   .ASCIC  <TTY$C_CR>
                             01         0554
           OD 2A 54 49 58 45 2A 00'     0556    991  TTY$A_CTRLZ::   .ASCIC  /*EXIT*/<TTY$C_CR>
                             07         0556
                       00000576         055E    992                  .BLKB   32-<.-TTY$A_CTRLZ>
50 55 52 52 45 54 4E 49 2A 0A 0D 00'    0576    993  TTY$A_CTRLY:    .ASCIC  <13><10>/*INTERRUPT*/<13><10>
                    0A 0D 2A 54         0582
                             0F         0576
                       00000596         0586    994                  .BLKB   32-<.-TTY$A_CTRLY>
OD 2A 4C 45 43 4E 41 43 2A 0A 0D 00'    0596    995  TTY$A_CTRLC:    .ASCIC  <13><10>/*CANCEL*/<13><10>
                             0A         05A2
                             0C         0596
                       000005B6         05A3    996                  .BLKB   32-<.-TTY$A_CTRLC>
4F 20 54 55 50 54 55 4F 2A 0A 0D 00'    05B6    997  TTY$A_CTRLO:    .ASCIC  <13><10>/*OUTPUT OFF*/<13><10>
                 0A 0D 2A 46 46         05C2
                             10         05B6
                       000005D6         05C7    998                  .BLKB   32-<.-TTY$A_CTRLO>
2A 4E 4F 20 54 55 50 54 55 4F 2A 00'    05D6    999  TTY$A_OUTON:    .ASCIC  /*OUTPUT ON*/<TTY$C_CR>
                             0D         05E2
                             0C         05D6
                       000005F6         05E3   1000                  .BLKB   32-<.-TTY$A_OUTON>
                                        05F6   1001
                                        05F6   1002      ;
                                        05F6   1003      ;DEC CRT ECHO STRINGS
                                        05F6   1004      ;
                                        05F6   1005      ; SAVE THE ATTRIBUTES GO INTO REVERSE VIDEO, PRINT THE MESSAGE THEN
                                        05F6   1006      ;        RESTORE THE ATTRIBUTES.
                                        05F6   1007      ;
                                        05F6   1008  TTY$A_CTRLZ_DEC::
```

```
74 69 78 45 20 6D 37 5B 1B 37 1B 00'  05F6   1009                  .ASCIC  <TTY$C_ESCAPE>/7/<TTY$C_ESCAPE>/[7m Exit /-
                                   20  0602
                         6D 5B 1B  0603   1010                          <TTY$C_ESCAPE>/[m/ -
                         0D 38 1B  0606   1011                          <TTY$C_ESCAPE>/8/<TTY$C_CR>
                               12  05F6
                         0000061E  0609   1012                  .BLKB   40-<.-TTY$A_CTRLZ_DEC>
                                   061E   1013 TTY$A_CTRLY_DEC:
6E 49 20 6D 37 5B 1B 37 1B 0A 0D 00'  061E   1014                  .ASCIC  <13><10><TTY$C_ESCAPE>/7/<TTY$C_ESCAPE>/[7m Interrupt /-
      20 74 70 75 72 72 65 74  062A
                         6D 5B 1B  0632   1015                          <TTY$C_ESCAPE>/[m/ -
                      0A 0D 38 1B  0635   1016                          <TTY$C_ESCAPE>/8/<13><10>
                               1A  061E
                         00000646  0639   1017                  .BLKB   40-<.-TTY$A_CTRLY_DEC>
                                   0646   1018 TTY$A_CTRLC_DEC:
61 43 20 6C 37 5B 1B 37 1B 0A 0D 00'  0646   1019                  .ASCIC  <13><10><TTY$C_ESCAPE>/7/<TTY$C_ESCAPE>/[7m Cancel /-
      20 6C 65 63 6E  0652
                         6D 5B 1B  0657   1020                          <TTY$C_ESCAPE>/[m/ -
                      0A 0D 38 1B  065A   1021                          <TTY$C_ESCAPE>/8/<13><10>
                               17  0646
                         0000066E  065E   1022                  .BLKB   40-<.-TTY$A_CTRLC_DEC>
                                   066E   1023 TTY$A_CTRLO_DEC:
75 4F 20 6D 37 5B 1B 37 1B 0A 0D 00'  066E   1024                  .ASCIC  <13><10><TTY$C_ESCAPE>/7/<TTY$C_ESCAPE>/[7m Output off /-
      20 66 66 6F 20 74 75 70 74  067A
                         6D 5B 1B  0683   1025                          <TTY$C_ESCAPE>/[m/ -
                      0A 0D 38 1B  0686   1026                          <TTY$C_ESCAPE>/8/<13><10>
                               1B  066E
                         00000696  068A   1027                  .BLKB   40-<.-TTY$A_CTRLO_DEC>
                                   0696   1028 TTY$A_OUTON_DEC:
70 74 75 4F 20 6D 37 5B 1B 37 1B 00'  0696   1029                  .ASCIC  <TTY$C_ESCAPE>/7/<TTY$C_ESCAPE>/[7m Output on /-
      20 6E 6F 20 74 75  06A2
                         6D 5B 1B  06A8   1030                          <TTY$C_ESCAPE>/[m/ -
                         0D 38 1B  06AB   1031                          <TTY$C_ESCAPE>/8/<TTY$C_CR>
                               17  0696
                         000006BE  06AE   1032                  .BLKB   40-<.-TTY$A_OUTON_DEC>
                                   06BE   1033 ;
                                   06BE   1034 ; SEQUENCES FOR TERMINALS THAT SUPPORT REGIS
                                   06BE   1035 ;
                                   06BE   1036 ; EXIT REGIS THEN PRINT DEC CRT CODES
                                   06BE   1037 ;
                                   06BE   1038 TTY$A_CTRLY_REG:
                         5C 1B 00'  06BE   1039                  .ASCIC  <TTY$C_ESCAPE>/\/-
74 6E 49 20 6D 37 5B 1B 37 1B 0A 0D  06C1   1040                          <13><10><TTY$C_ESCAPE>/7/<TTY$C_ESCAPE>/[7m Interrupt /-
      20 74 70 75 72 72 65  06CD
                         6D 5B 1B  06D4   1041                          <TTY$C_ESCAPE>/[m/ -
                      0A 0D 38 1B  06D7   1042                          <TTY$C_ESCAPE>/8/<13><10>
                               1C  06BE
                         000006E6  06DB   1043                  .BLKB   40-<.-TTY$A_CTRLY_REG>
                                   06E6   1044 TTY$A_CTRLC_REG:
                         5C 1B 00'  06E6   1045                  .ASCIC  <TTY$C_ESCAPE>/\/-
6E 61 43 20 6D 37 5B 1B 37 1B 0A 0D  06E9   1046                          <13><10><TTY$C_ESCAPE>/7/<TTY$C_ESCAPE>/[7m Cancel /-
      20 6C 65 63  06F5
                         6D 5B 1B  06F9   1047                          <TTY$C_ESCAPE>/[m/ -
                      0A 0D 38 1B  06FC   1048                          <TTY$C_ESCAPE>/8/<13><10>
                               19  06E6
                         0000070E  0700   1049                  .BLKB   40-<.-TTY$A_CTRLC_REG>
                                   070E   1050 TTY$A_DEOL::
20 20 20 20 20 20 20 20 20 20 0D 00'  070E   1051                  .ASCIC  <TTY$C_CR>/                       /-
```

```
      20 20 20 20 20 20 20 20 20 20  071A
                                 0D  0724  1052                                    <TTY$C_CR>
                                 16  070E
                                     0725  1053 TTY$A_ANSI_UPCEL::
      4B 5B 1B 41 5B 1B 0D 00'       0725  1054                        .ASCIC   <TTY$C_CR><TTY$C_ESCAPE>/[A/<TTY$C_ESCAPE>/[K/
                                 07  0725
                                     072D  1055 TTY$A_ANSI_DEOL::
            4B 5B 1B 0D 00'          072D  1056                        .ASCIC   <TTY$C_CR><TTY$C_ESCAPE>/[K/
                                 04  072D
                                     0732  1057 TTY$A_ANSIBACKUP::
      44 30 30 30 5B 1B 00'          0732  1058                        .ASCIC   <TTY$C_ESCAPE>/[000D/
                                 06  0732
                                     0739  1059 TTY$A_ANSICEL::
            4B 5B 1B 00'             0739  1060                        .ASCIC   <TTY$C_ESCAPE>/[K/
                                 03  0739
                                     073D  1061 ;
                                     073D  1062 ; VTAB AND FORM
                                     073D  1063 ;
      0A 0A 0A 0A 04                 073D  1064 TTY$A_VTAB::           .BYTE    4,TTY$C_LF,TTY$C_LF,TTY$C_LF,TTY$C_LF
                              00     0742  1065 TTY$A_MECHFORM::       .BYTE    0
      0A 0A 0A 0A 0D 05             0743  1066 TTY$A_FORM::           .BYTE    5,TTY$C_CR,TTY$C_LF,TTY$C_LF,TTY$C_LF,TTY$C_LF
      0C 0A 0A 0A 0A 05             0749  1067 TTY$A_LONGFORM::       .BYTE    5,TTY$C_LF,TTY$C_LF,TTY$C_LF,TTY$C_LF,TTY$C_FF
                                     074F  1068 ;
                                     074F  1069 ; MAXIMUM POSSIBLE ABSOLUTE SYSTEM TIME.  USED TO KEEP EXE$TIMEOUT
                                     074F  1070 ; FROM TIMING OUT READS WITH ZERO SECOND TIMEOUT.
                                     074F  1071 ;
            7FFFFFFF                 074F  1072 TTY$A_MAXTIME:: .LONG    ^X7FFFFFFF
                                     0753  1073 ;
                                     0753  1074
```

```
        0753  1076              .SBTTL  TERMINAL CLASS DRIVER PROLOGUE TABLE
    00000000  1077              .PSECT  $$$105_PROLOGUE
        0000  1078
        0000  1079      ;
        0000  1080      ; CLASS DRIVER DPT
        0000  1081      ;
        0000  1082
        0000  1083  TT$DPT::                                  ; DRIVER START
        0000  1084              DPTAB   -                      ; DRIVER PROLOGUE TABLE
        0000  1085                      END=TT_END,-           ; END OF CLASS DRIVER
        0000  1086                      FLAGS=DPT$M_NOUNLOAD,- ; UNLOAD NOT ALLOWED
        0000  1087                      UCBSIZE=UCB$C_TL_LENGTH,- ; SIZE OF UCB
        0000  1088                      ADAPTER=NULL,-         ; ADAPTER TYPE
        0000  1089                      NAME=TTDRIVER,-        ; NAME OF DRIVER
        0000  1090                      VECTOR=CLASS_VECTOR    ; CLASS VECTOR TABLE
        0038  1091
        0038  1092              DPT_STORE INIT
        0038  1093              DPT_STORE UCB,UCB$B_FIPL,B,8   ; FORK IPL
        003C  1094              DPT_STORE UCB,UCB$L_DEVCHAR,L,<-; CHARACTERISTICS
        003C  1095                      DEV$M_REC!-            ;
        003C  1096                      DEV$M_AVL!-           ;
        003C  1097                      DEV$M_IDV!-           ;
        003C  1098                      DEV$M_ODV!-           ;
        003C  1099                      DEV$M_TRM!-           ;
        003C  1100                      DEV$M_CCL>
        0043  1101              DPT_STORE UCB,UCB$L_DEVCHAR2,L,<-; DEVICE CHARACTERISTICS
        0043  1102                      DEV$M_NNM>            ; PREFIX WITH 'NODE$'
        004A  1103              DPT_STORE UCB,UCB$B_DEVCLASS,B,DC$_TERM;
        004E  1104              DPT_STORE UCB,UCB$B_DEVTYPE,B,TT$_UNKNOWN   ; TYPE
        0052  1105              DPT_STORE UCB,UCB$W_DEVBUFSIZ,aw,TTY$GW_DEFBUF ; BUFFER SIZE
        0059  1106              DPT_STORE UCB,UCB$L_DEVDEPEND,aL,TTY$GL_DEFCHAR ; DEFAULT CHARACTERS
        0060  1107              DPT_STORE UCB,UCB$L_DEVDEPND2,aL,TTY$GL_DEFCHAR2; DEFAULT CHARACTERS
        0067  1108              DPT_STORE UCB,UCB$B_DIPL,B,21            ; DEVICE IPL
        006B  1109              DPT_STORE ORB,ORB$B_FLAGS,B,-       ; Protection block flags
        006B  1110                      <ORB$M_PROT_16>     ; SOGW protection word
        006F  1111              DPT_STORE ORB,ORB$W_PROT,aw,TTY$GW_PROT ; Default allocation protection
        0076  1112              DPT_STORE ORB,ORB$L_OWNER,aL,TTY$GL_OWNUIC ; Default owner UIC
        007D  1113              DPT_STORE DDB,DDB$L_DDT,D,TT$DDT
        0082  1114
        0082  1115              DPT_STORE REINIT
        0082  1116              DPT_STORE CRB,CRB$L_INTD+VEC$L_INITIAL,D,VT$INITIAL  ; CONTROLLER INIT
        0087  1117              DPT_STORE CRB,CRB$L_INTD+VEC$L_UNITINIT,D,VT$INITLINE; UNIT INIT
        008C  1118              DPT_STORE END
        0000  1119
        0000  1120
        0000  1121
```

TTYDRVDAT
V04-001

H 15
- Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 33
DRIVER DISPATCH TABLE AND FUNCTION DECIS 7-SEP-1984 17:56:59 [TTDRVR.SRC]TTYDRVDAT.MAR;2   (26)

```
0000  1123                  .SBTTL  DRIVER DISPATCH TABLE AND FUNCTION DECISION TABLE
0000  1124        ;
0000  1125        ; DRIVER DISPATCH TABLE
0000  1126        ;
0000  1127                  DDTAB   TT,-                    ; DRIVER DISPATCH TABLE
0000  1128                          TTY$STARTIO,-           ; START IO OPERATION
0000  1129                          0,-                     ; UNEXPECTED INTERRUPT
0000  1130                          FUNCTION,-              ; FUNCTION DECISION TABLE
0000  1131                          TTY$CANCELIO,-          ; CANCEL I/O
0000  1132                          0,-                     ; REGISTER DUMP ROUTINE
0000  1133                          0,-                     ; SIZE OF DIAGNOSTIC BUFFER
0000  1134                          0,-                     ; SIZE OF ERROR LOG BUFFER
0000  1135                          0,-                     ; Unit initialization routine
0000  1136                          TTY$WRTSTARTIO          ; Alternate START I/O
078B  1137
078B  1138        ;
078B  1139        ; FUNCTION DECISION TABLE FOR ALL TERMINALS
078B  1140        ;
078B  1141        FUNCTION:
078B  1142                  FUNCTAB ,-                      ; LEGAL FUNCTIONS
078B  1143                          <READLBLK,-
078B  1144                          WRITELBLK,-
078B  1145                          READVBLK,-
078B  1146                          WRITEVBLK,-
078B  1147                          READPBLK,-
078B  1148                          WRITEPBLK,-
078B  1149                          READPROMPT,-
078B  1150                          TTYREADALL,-
078B  1151                          TTYREADPALL,-
078B  1152                          SETMODE,-
078B  1153                          SETCHAR,-
078B  1154                          SENSEMODE,-
078B  1155                          SENSECHAR,-
078B  1156                          >
0793  1157                  FUNCTAB ,-                      ; BUFFERED I/O FUNCTIONS
0793  1158                          <READLBLK,-
0793  1159                          WRITELBLK,-
0793  1160                          READVBLK,-
0793  1161                          WRITEVBLK-
0793  1162                          READPBLK,-
0793  1163                          READPROMPT,-
0793  1164                          TTYREADALL,-
0793  1165                          TTYREADPALL,-
0793  1166                          WRITEPBLK,-
0793  1167                          >
079B  1168                  FUNCTAB TTY$FDTREAD,<READLBLK,READVBLK,READPBLK,READPROMPT,-
079B  1169                                  TTYREADALL,TTYREADPALL>
07A7  1170                  FUNCTAB TTY$FDTWRITE,<WRITELBLK,WRITEVBLK,WRITEPBLK>
07B3  1171                  FUNCTAB TTY$FDTSETM,<SETMODE>
07BF  1172                  FUNCTAB TTY$FDTSETC,<SETCHAR>
07CB  1173                  FUNCTAB TTY$FDTSENSEM,<SENSEMODE>
07D7  1174                  FUNCTAB TTY$FDTSENSEC,<SENSECHAR>
07E3  1175
```

```
                    07E3   1177  ;
                    07E3   1178  ;            THIS TABLE IS USED FOR COMMUNICATION WITH THE TERMINAL CLASS DRIVER.
                    07E3   1179  ;            IT INITIALLY CONTAINS RELATIVE OFFSETS TO VARIOUS ROUTINES AND
                    07E3   1180  ;            DATA STRUCTURES NEEDED BY TERMINAL PORT DRIVERS. AT DRIVER LOAD
                    07E3   1181  ;            THE RELATIVE OFFSETS ARE RELOCATED TO ACTUAL VIRTUAL ADDRESSES.
                    07E3   1182  ;            THE LIST IS TERMINATED BY A 0 LONGWORD TO SIGNAL THE RELOCATION
                    07E3   1183  ;            ROUTINE WHERE THE LIST TERMINATES.
                    07E3   1184  ;
                    07E3   1185  CLASS_VECTOR:
         00000000'  07E3   1186          .LONG   TTY$GETNEXTCHAR -         TT$DPT  ; GET NEXT STRING
         00000000'  07E7   1187          .LONG   TTY$PUTNEXTCHAR -         TT$DPT  ; PUT NEXT STRING
         00000000'  07EB   1188          .LONG   TTY$SETUP_UCB -           TT$DPT  ; ROUTINE TO INIT UCB
         00000000'  07EF   1189          .LONG   PORT_TRANSITION -         TT$DPT  ; ROUTINE TO HANDLE MODEM TRANSITION
         00000753'  07F3   1190          .LONG   TT$DDT -                  TT$DPT  ; CLASS DRIVER DDT
         00000000'  07F7   1191          .LONG   TTY$READERROR -           TT$DPY
         00000000'  07FB   1192          .LONG   TTY$CLASS_DISCONNECT -    TT$DPT  ; CLASS DISCONNECT ROUTINE
         00000000'  07FF   1193          .LONG   TTY$CLASS_FORK -          TT$DPT  ; CLASS FORK ROUTINE
         00000000'  0803   1194          .LONG   TTY$POWERACTION -         TT$DPT  ; CLASS POWERFAIL ACTION ROUTINE
                    0807   1195  ;
                    0807   1196  ; A pointer to tables is included here so that changes to the
                    0807   1197  ; tables can be made from code external to the driver.
                    0807   1198  ;
         0000080B'  0807   1199          .LONG   TTY$A_TABLES -            TT$DPT  ; MISCELLANEOUS TABLES
                    080B   1200  ;
                    080B   1201  ;            THIS MARKS THE END OF THE CLASS DRIVER VECTORS.
                    080B   1202  ;            THE VECTORS AFTER THIS ARE USED FOR OTHER PURPOSES WITHIN THE
                    080B   1203  ;            DRIVER. THEY ARE INCLUDED HERE TO TAKE ADVANTAGE OF THE AUTOMATIC
                    080B   1204  ;            RELOCATION THAT TAKES PLACE AT BOOT TIME. BY REPLACING ANY OF
                    080B   1205  ;            THESE FOLLOWING VECTORS, THE TABLES THAT THEY POINT TO CAN BE
                    080B   1206  ;            "SWITCHED" WITHOUT MODIFIATION OF THE DRIVER.
                    080B   1207  ;
                    080B   1208  TTY$A_TABLES:
                    080B   1209  TTY$A_INTECHO::
         00000827'  080B   1210          .LONG   INTECHO -                 TT$DPT  ; INTERRUPT ECHOS
                    080F   1211  TTY$A_EXITECHO::
         00000847'  080F   1212          .LONG   EXITECHO -                TT$DPT  ; EXIT ECHOS
                    0813   1213  TTY$A_CTRLOECHO::
         0000084F'  0813   1214          .LONG   CTRLOECHO -               TT$DPT  ; CTRLO ECHOS
                    0817   1215  TTY$A_INPFALL::
         00000863'  0817   1216          .LONG   NOFALL -                  TT$DPT  ; INPUT FALLBACK TABLE
                    081B   1217  TTY$A_FALLTAB::
         000002DA'  081B   1218          .LONG   FALLTAB -                 TT$DPT  ; FALLBACK TRANSLATION
                    081F   1219  TTY$A_EXPAN::
         00000000'  081F   1220          .LONG   EXPAN -                   TT$DPT  ; EXPANSION LIST FOR BREAK CHARACTEE
                    0823   1221  TTY$A_EXPTAB::
         00000000'  0823   1222          .LONG   EXPTAB -                  TT$DPT  ; FALLBACK BREAK CHARACTER LIST
                    0827   1223  ;
                    0827   1224  ;            HERE ARE THE DEFAULT TABLES PROVIDED BY TTDRIVER.
                    0827   1225  ;
                    0827   1226  INTECHO:
         00000576'  0827   1227          .LONG   TTY$A_CTRLY -             TT$DPT  ; 0
         00000596'  082B   1228          .LONG   TTY$A_CTRLC -             TT$DPT  ; 1
         000006BE'  082F   1229          .LONG   TTY$A_CTRLY_REG -         TT$DPT  ; 2 (ASSUMES DECCRT)
         000006E6'  0833   1230          .LONG   TTY$A_CTRLC_REG -         TT$DPT  ; 3 (ASSUMES DECCRT)
         0000061E'  0837   1231          .LONG   TTY$A_CTRLY_DEC -         TT$DPT  ; 4
         00000646'  083B   1232          .LONG   TTY$A_CTRLC_DEC -         TT$DPT  ; 5
         000006BE'  083F   1233          .LONG   TTY$A_CTRLY_REG -         TT$DPT  ; 6
```

J 15

TTYDRVDAT   - Terminal driver data base module   16-SEP-1984 02:16:16   VAX/VMS Macro V04-00   Page 35
V04-001   DRIVER DISPATCH TABLE AND FUNCTION DECIS 7-SEP-1984 17:56:59   [TTDRVR.SRC]TTYDRVDAT.MAR;2   (26)

```
000006E6' 0843 1234             .LONG   TTY$A_CTRLC_REG -       TT$DPT  ; 7
          0847 1235 EXITECHO:
00000556' 0847 1236             .LONG   TTY$A_CTRLZ -          TT$DPT  ;
000005F6' 084B 1237             .LONG   TTY$A_CTRLZ_DEC -      TT$DPT  ;
          084F 1238 CTRLOECHO:
000005B6' 084F 1239             .LONG   TTY$A_CTRLO -         TT$DPT  ;
0000066E' 0853 1240             .LONG   TTY$A_CTRLO_DEC -     TT$DPT  ;
000005D6' 0857 1241             .LONG   TTY$A_OUTON -         TT$DPT  ;
00000696' 085B 1242             .LONG   TTY$A_OUTON_DEC -     TT$DPT  ;
          085F 1243
00000000  085F 1244             .LONG   0                             ; END OF LIST
          0863 1245
          0863 1246 NOFALL:
00000000  0863 1247             .LONG   0
```

```
                              0867  1249
                              0867  1250              .SBTTL  LOGICAL UCB INIT ROUTINES
                              0867  1251      ;
                              0867  1252      ;      THESE ROUTINES SERVE AS THE CONTROLLER AND UNIT INIT
                              0867  1253      ;      ROUTINES WHEN THE TEMPLATE UCB IS CONNECTED VIA SYSGEN.
                              0867  1254      ;      THEY SAVE THE ADDRESS OF THE TEMPLATE DDB AND UCB FOR
                              0867  1255      ;      CLONEING FUTURE LOGICAL TERMINAL UCBS
                              0867  1256      ;
                              0867  1257
                              0867  1258      VT$INITIAL:                                 ; CONTROLLER INIT
          00000887'EF    D5   0867  1259              TSTL    VT$DDB                      ; SKIP IF ALREADY SET UP
                    07   12   086D  1260              BNEQ    10$
          00000887'EF  56 DO   086F  1261              MOVL    R6,VT$DDB                   ; SAVE ADDRESS OF DDB
                         05   0876  1262  10$:         RSB
                              0877  1263
                              0877  1264      VT$INITLINE:                                ; UNIT INIT
          0000088B'EF    D5   0877  1265              TSTL    VT$UCB                      ; SKIP IF ALREADY SET UP
                    07   12   087D  1266              BNEQ    10$
          0000088B'EF  55 DO   087F  1267              MOVL    R5,VT$UCB                   ; SAVE TEMPLATE UCB ADDRESS
                         05   0886  1268  10$:         RSB
                              0887  1269
                              0887  1270      VT$DDB::
               00000000  0887  1271              .LONG   0
                              088B  1272      VT$UCB::
               00000000  088B  1273              .LONG   0
                              088F  1274
                              088F  1275
                              088F  1276              .END
```

L 15

```
$$                     = 00000100            MASKH                  = 00000000
$$$                    = 00000020 R    05    MASKL                  = 08000000
$$$$                   = 00000146 R    02    NOFALL                   00000863 R    02
$$OP                   = 00000002            NUM09                  = 00000004
ALPHA_LOWER            = 00000002            ORB$B_FLAGS            = 0000000B
ALPHA_UPPER            = 00000001            ORB$L_OWNER            = 00000000
AT$_NULL                 ******** X    05    ORB$M_PROT_16          = 00000001
CHAR                   = 00000100            ORB$W_PROT             = 00000018
CHAR_ALL               = 00000020            PLUS_MINUS             = 00000008
CLASS_VECTOR             000007E3 R    02    PORT_TRANSITION          ******** X    02
CRB$L_INTD             = 00000024            PRINTABLE              = 00000010
CTRLOECHO                0000084F R    02    SLEN                   = 00000001
DCS_TERM                 ******** X    05    TT$C_BAUD_110          = 00000003
DDB$L_DDT              = 0000000C            TT$C_BAUD_1200         = 00000008
DEV$M_AVL                ******** X    05    TT$C_BAUD_150          = 00000005
DEV$M_CCL                ******** X    05    TT$C_BAUD_1800         = 00000009
DEV$M_IDV                ******** X    05    TT$C_BAUD_19200        = 00000010
DEV$M_NNM                ******** X    05    TT$C_BAUD_2400         = 0000000B
DEV$M_ODV                ******** X    05    TT$C_BAUD_300          = 00000006
DEV$M_REC                ******** X    05    TT$C_BAUD_3600         = 0000000C
DEV$M_TRM                ******** X    05    TT$C_BAUD_4800         = 0000000D
DPT$C_LENGTH           = 00000038            TT$C_BAUD_600          = 00000007
DPT$C_VERSION          = 00000004            TT$C_BAUD_9600         = 0000000F
DPT$INITAB               00000038 R    05    TT$DDT                   00000753 RG   02
DPT$M_NOUNLOAD         = 00000004            TT$DPT                   00000000 RG   05
DPT$REINITAB             00000082 R    05    TT$_UNKNOWN            = 00000000
DPT$TAB                  00000000 R    05    TTY$AB_600               00000026 RG   02
DYN$C_CRB              = 00000005            TTY$AB_9600              00000000 RG   02
DYN$C_DDB              = 00000006            TTY$A_8BITESC            0000029A RG   02
DYN$C_DPT              = 0000001E            TTY$A_ANSIBACKUP         00000732 RG   02
DYN$C_ORB              = 00000049            TTY$A_ANSICEL            00000739 RG   02
DYN$C_UCB              = 00000010            TTY$A_ANSI_DEOL          0000072D RG   02
EXITECHO                 00000847 R    02    TTY$A_ANSI_UPCEL         00000725 RG   02
EXPAN                    00000000 R    04    TTY$A_BACKSPACE          0000054B RG   02
EXPTAB                   00000000 R    03    TTY$A_CCLIST             00000046 RG   02
FALLTAB                  000002DA R    02    TTY$A_CTRLC              00000596 R    02
FUNCTAB_LEN            = 00000058            TTY$A_CTRLC_DEC          00000646 R    02
FUNCTION                 0000078B R    02    TTY$A_CTRLC_REG          000006E6 R    02
INTECHO                  00000827 R    02    TTY$A_CTRLO              000005B6 R    02
INTERRUPT_KEY            00000246 RG   02    TTY$A_CTRLOECHO          00000813 RG   02
INTERRUPT_KEY_LEN     = 00000005 G           TTY$A_CTRLO_DEC          0000066E R    02
IO$_READLBLK          = 00000021            TTY$A_CTRLR              00000554 RG   02
IO$_READPBLK          = 0000000C            TTY$A_CTRLU              00000552 RG   02
IO$_READPROMPT        = 00000037            TTY$A_CTRLY              00000576 R    02
IO$_READVBLK          = 00000031            TTY$A_CTRLY_DEC          0000061E R    02
IO$_SENSECHAR         = 0000001B            TTY$A_CTRLY_REG          000006BE R    02
IO$_SENSEMODE         = 00000027            TTY$A_CTRLZ              00000556 RG   02
IO$_SETCHAR           = 0000001A            TTY$A_CTRLZ_DEC          000005F6 RG   02
IO$_SETMODE           = 00000023            TTY$A_DELCRTTAB          00000543 RG   02
IO$_TTYREADALL        = 0000003A            TTY$A_DEOL               0000070E RG   02
IO$_TTYREADPALL       = 0000003B            TTY$A_ESCAPE             00000266 RG   02
IO$_VIRTUAL           = 0000003F            TTY$A_ESCINIT            000002BA RG   02
IO$_WRITELBLK         = 00000020            TTY$A_ESC_OUT            0000028A RG   02
IO$_WRITEPBLK         = 0000000B            TTY$A_EXITECHO           0000080F RG   02
IO$_WRITEVBLK         = 00000030            TTY$A_EXPAN              0000081F RG   02
IOC$MNTVER               ******** X    02    TTY$A_EXPTAB             00000823 RG   02
IOC$RETURN               ******** X    02    TTY$A_FALLTAB            0000081B RG   02
```

```
TTY$A_FCNTKN                        0000024B RG   02     TTY$K_ET_CTRLU                    = 00000001
TTY$A_FORM                          00000743 RG   02     TTY$K_ET_DELEFT                   = 00000003
TTY$A_INPFALL                       00000817 RG   02     TTY$K_ET_DELETE_WORD             = 00000009
TTY$A_INTECHO                       0000080B RG   02     TTY$K_ET_ESCAPE                  = 00000004
TTY$A_LONGFORM                      00000749 RG   02     TTY$K_ET_FORWARD_CHAR            = 00000006
TTY$A_MAXTIME                       0000074F RG   02     TTY$K_ET_MOVE_BOL                = 00000008
TTY$A_MECHFORM                      00000742 RG   02     TTY$K_ET_MOVE_EOL                = 00000007
TTY$A_OUTON                         000005D6 R    02     TTY$K_ET_QUOTING                 = 0000000A
TTY$A_OUTON_DEC                     00000696 R    02     TTY$K_ET_RECALL                  = 0000000B
TTY$A_PREFIX                        0000041A RG   02     TTY$K_ET_TERMINATE               = 0000000E
TTY$A_SPACEBACK                     0000054F RG   02     TTY$K_ET_TOGGEL                  = 0000000C
TTY$A_STANDARD                      000003DA RG   02     TTY$K_ET_UNUSED                  = 0000000D
TTY$A_TAB                           0000053A RG   02     TTY$K_MAXESCTKN                  = 0000001B   G
TTY$A_TABLES                        0000080B R    02     TTY$K_SS2                        = 0000000F   G G
TTY$A_TYPE                          00000146 RG   02     TTY$K_SS3                        = 00000018   G
TTY$A_VTAB                          0000073D RG   02     TTY$M_CH_CTRL                    = 00000020
TTY$A_WORDTERM                      000003FA RG   02     TTY$M_CH_CTRL2                   = 00000080
TTY$CANCELIO                        ********  X    02     TTY$M_CH_CTRL3                   = 00000040
TTY$CLASS_DISCONNECT                ********  X    02     TTY$M_CH_LOWER                   = 00000008
TTY$CLASS_FORK                      ********  X    02     TTY$M_CH_SPEC                    = 00000010
TTY$C_BLANK                      = 00000020            TTY$POWERACTION                  ********  X    02
TTY$C_BS                         = 00000008            TTY$PUTNEXTCHAR                  ********  X    02
TTY$C_CR                         = 0000000D            TTY$READERROR                    ********  X    02
TTY$C_CSI                        = 0000009B            TTY$SETUP_UCB                    ********  X    02
TTY$C_CTRLA                      = 00000001            TTY$STARTIO                      ********  X    02
TTY$C_CTRLB                      = 00000002            TTY$WRTSTARTIO                   ********  X    02
TTY$C_CTRLD                      = 00000004            TT_END                           = 00000060 R    03
TTY$C_CTRLE                      = 00000005            UCB$B_DEVCLASS                   = 00000040
TTY$C_CTRLF                      = 00000006            UCB$B_DEVTYPE                    = 00000041
TTY$C_CTRLR                      = 00000012            UCB$B_DIPL                       = 0000005E
TTY$C_CTRLU                      = 00000015            UCB$B_FIPL                       = 0000000B
TTY$C_CTRLV                      = 00000016            UCB$C_TL_LENGTH                  = 000000B0
TTY$C_CTRLZ                      = 0000001A            UCB$L_DEVCHAR                    = 00000038
TTY$C_DELETE                     = 0000007F            UCB$L_DEVCHAR2                   = 0000003C
TTY$C_ESCAPE                     = 0000001B            UCB$L_DEVDEPEND                  = 00000044
TTY$C_FF                         = 0000000C            UCB$L_DEVDEPND2                  = 00000048
TTY$C_LF                         = 0000000A            UCB$W_DEVBUFSIZ                  = 00000042
TTY$C_LOWESC1                    = 0000007D            VEC$L_INITIAL                    = 0000000C
TTY$C_LOWESC2                    = 0000007E            VEC$L_UNITINIT                   = 00000018
TTY$C_SS2                        = 0000008E            VERIFY_ARRAY                        0000043A RG   02
TTY$C_SS3                        = 0000008F            VT$DDB                              00000887 RG   02
TTY$C_TAB                        = 00000009            VT$INITIAL                          00000867 R    02
TTY$FDTREAD                         ********  X    02     VT$INITLINE                         00000877 R    02
TTY$FDTSENSEC                       ********  X    02     VT$UCB                              0000088B RG   02
TTY$FDTSENSEM                       ********  X    02     XYCONTROL                        = 00000008
TTY$FDTSETC                         ********  X    02     XYCTRL2                          = 00000003
TTY$FDTSETM                         ********  X    02     XYCTRL3                          = 0000002F
TTY$FDTWRITE                        ********  X    02     XYLOWER                          = 0000001D
TTY$GETNEXTCHAR                     ********  X    02     XYSPEC                           = 00000007
TTY$GL_DEFCHAR                      ********  X    05     Y                                = 00000000
TTY$GL_DEFCHAR2                     ********  X    05
TTY$GL_OWNUIC                       ********  X    05
TTY$GW_DEFBUF                       ********  X    05
TTY$GW_PROT                         ********  X    05
TTY$K_CSI                        = 00000015   G
TTY$K_ET_BACK_CHAR               = 00000005
TTY$K_ET_CTRLR                   = 00000002
```

```
                                              +-----------------+
                                              ! Psect synopsis !
                                              +-----------------+


PSECT name                     Allocation              PSECT No.   Attributes
----------                     ----------              ---------   ----------
.  ABS  .                      00000000 (      0.)     00 (   0.)  NOPIC  USR  CON  ABS  LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
$ABS$                          00000000 (      0.)     01 (   1.)  NOPIC  USR  CON  ABS  LCL NOSHR NOEXE NORD    WRT  NOVEC BYTE
$$$115_DRIVER                  0000088F (   2191.)     02 (   2.)  NOPIC  USR  CON  REL  LCL NOSHR  EXE   RD     WRT  NOVEC LONG
$$$115_TTDRVR_EXPTAB           00000060 (     96.)     03 (   3.)  NOPIC  USR  CON  REL  LCL NOSHR  EXE   RD     WRT  NOVEC BYTE
$$$115_TTDRVR_EXPAN            00000000 (      0.)     04 (   4.)  NOPIC  USR  CON  REL  LCL NOSHR  EXE   RD     WRT  NOVEC BYTE
$$$105_PROLOGUE                0000008D (    141.)     05 (   5.)  NOPIC  USR  CON  REL  LCL NOSHR  EXE   RD     WRT  NOVEC BYTE


                                          +-------------------------+
                                          ! Performance indicators  !
                                          +-------------------------+


Phase                   Page faults     CPU Time         Elapsed Time
-----                   -----------     --------         ------------
Initialization                   29     00:00:00.03      00:00:02.46
Command processing              118     00:00:00.38      00:00:02.72
Pass 1                          667     00:00:24.74      00:01:30.78
Symbol table sort                 0     00:00:01.98      00:00:08.88
Pass 2                          223     00:00:05.31      00:00:20.77
Symbol table output              26     00:00:00.12      00:00:01.36
Psect synopsis output             3     00:00:00.02      00:00:00.02
Cross-reference output            0     00:00:00.00      00:00:00.00
Assembler run totals           1068     00:00:32.58      00:02:06.99
```

The working set limit was 2100 pages.
207939 bytes (407 pages) of virtual memory were used to buffer the intermediate code.
There were 100 pages of symbol table space allocated to hold 1847 non-local and 7 local symbols.
1276 source lines were read in Pass 1, producing 28 object records in Pass 2.
41 pages of virtual memory were used to define 38 macros.

```
                                          +--------------------------+
                                          ! Macro library statistics !
                                          +--------------------------+


Macro library name                      Macros defined
------------------                      --------------
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                22
_$255$DUA28:[SYSLIB]STARLET.MLB;2              6
TOTALS (all libraries)                        28
```

2031 GETS were required to define 28 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:TTYDRVDAT/OBJ=OBJ$:TTYDRVDAT MSRC$:TTYDRVDAT/UPDATE=(ENH$:TTYDRVDAT)+EXECML$/LIB